

REMARKS

Applicant has carefully reviewed the Office Action mailed January 12, 2006 and offers the following remarks.

Before addressing the rejection, Applicant provides a brief summary of the present invention so that the remarks relating to the rejection are considered in the proper context. The present invention is designed to maximize throughput while guaranteeing a certain amount of fairness and meeting Quality of Service (QoS) requirements for users of a wireless network. Thus, the present invention has three factors that affect its scheduling of transmissions. The present invention determines a temporal fading factor based on channel conditions. This temporal fading factor is thus based on an average channel condition for each terminal. The present invention also determines a throughput fairness factor based on the throughput capability of each of the terminals. The present invention also determines a delay QoS factor based on delivery times. Based on these three factors, a weighting factor is calculated and the transmissions from various queued data are scheduled.

Claims 1-33 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Patel et al. (hereinafter "Patel") in view of Molloy et al. (hereinafter "Molloy"). Applicant respectfully traverses. The proposed combination of Patel and Molloy does not teach or suggest each and every element of the claims. In addition, the proposed combination is not proper because the alleged motivation to combine the references does not in fact suggest the proposed combination, and the stated motivation is not supported by actual evidence.

As an initial matter, Applicant notes that the Examiner did not address all of the arguments in the Response to Office Action filed by Applicant on November 21, 2005. In that Response, Applicant responded to the previous rejection of claims 1-33 under 35 U.S.C. § 102(e) as being anticipated by Patel by pointing out that various elements of the claims were not taught by Patel. The Examiner now admits that Patel does not teach the network interface and the wireless interface of the present claims and cites Molloy to allegedly teach these elements. However, Applicant reasserts its previous arguments that the following elements are not taught by Patel:

a temporal fading factor based on current channel conditions relative to an average channel condition for each of the plurality of access terminals;

a throughput fairness factor based on the throughput capability for each of the access terminals;

a delay Quality of Service (QoS) factor based on delivery times associated with at least one unit for each of the plurality of access terminals; and

a weighting factor based on the temporal fading factor, throughput fairness factor, and delay QoS factor.

For a complete discussion of how Patel fails to teach these elements, Applicant refers the Examiner to pages 3-5 of Applicant's Response to the Office Action filed on November 21, 2005.

In summary, with respect to the temporal fading factor limitation, while the passage in Patel cited by the Patent Office as teaching this element (col. 9, lines 26-40) mentions queues and congestion, there is no teaching within the passage that the congestion relates to a temporal fading factor and that this factor is based on an average channel condition, as recited in the claim.

With respect to the limitation of a throughput fairness factor based on throughput capability of each of the plurality of access terminals, the passage in Patel cited by the Patent Office as teaching that limitation (col. 10, lines 26-42) does indicate that fairness is considered, but there is no indication that Patel's system actually determines a fairness throughput factor based on the throughput capability for each of the access terminals. Rather, fairness in Patel is achieved by servicing the queues in the order in which they were received (see Patel, col. 10, lines 32-33). The fairness factor is never determined in the cited passage.

With respect to the limitation of a delay Quality of Service (QoS) factor based on delivery times associated with at least one unit for each of the plurality of access terminals, the passage in Patel asserted by the Patent Office as teaching this limitation (col. 16, lines 1-8) discusses congestion control techniques. There is nothing in the passage about a delay QoS factor, such as the one recited in the present invention.

Even if the Patent Office is able to identify where the temporal fading factor, throughput fairness factor, and delay QoS factor are taught in Patel, claim 1 also recites calculating a weighting factor based on these three factors. The portion of Patel asserted to teach the weighting factor (col. 16, lines 39-61) does not teach a weighting factor based on the other three factors, but merely discloses an equation to calculate variable "A", which is defined as the

average computed bandwidth at time "t". Likewise, while the passage does mention weighted averages, this is the weighted average of queue lengths, not a weight to be applied to the queues to make scheduling decisions. As such, the cited passage does not teach or suggest the claimed element. In short, claim 1 has numerous elements that are not taught by Patel.

In addition, claim 1 recites a network interface and a wireless interface. The Patent Office now admits that these elements are not taught by Patel, but asserts these elements are taught by Molloy, and therefore rejects claim 1 as being obvious under 35 U.S.C. § 103(a). Even if Molloy teaches these elements, the Patent Office has not made a proper showing to combine the Molloy and Patel references in an obviousness rejection.

For the Patent Office to combine references in an obviousness rejection, the Patent Office must prove there is a suggestion to combine the references. For the Patent Office to prove that there is a suggestion to combine the references, the Patent Office must do two things. First, the Patent Office must state a motivation to combine the references, and second, the Patent Office must support the stated motivation with actual evidence. *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). In the present case, the Examiner's proposed motivation is to enable the system of Patel to have a network interface and a wireless interface so that the system would correct the quality of service. Initially, Applicant notes that the proposed motivation is not entirely logical. There is nothing that would compel one of ordinary skill in the art that wants to correct quality of service to look to Molloy in order to add a network interface and wireless interface to the system of Patel. Even if the Examiner's asserted motivation to combine the references is logical, it is clear that the stated motivation is not supported by actual evidence. Since the alleged motivation does not in fact suggest the proposed combination, and the stated motivation is not supported by actual evidence, the combination of Patel and Molloy is not proper. Since the proposed combination is not proper, the obvious rejection is not proper. As a result, the obvious rejection under 35 U.S.C. § 103(a) should be withdrawn.

Even if the Patent Office can properly combine the references, to establish *prima facie* obviousness, the Patent Office must show where each and every element of the claim is taught or suggested in the combination. MPEP § 2143.03. If the Patent Office cannot establish obviousness, the claims are allowable. As set forth above, Patel does not teach several elements of claim 1. The addition of Molloy to form the combination does not correct the deficiencies of Patel. Molloy is directed to a system and method for providing improved performance of

Internet protocols over wireless networks within the link layer of a protocol stack by using a selectable basic error-detecting/correcting protocol and a selectable robust error-detecting/correcting protocol to respond to low wireless signal quality. It does not teach the temporal fading factor, throughput fairness factor, delay QoS factor, and weighting factor limitations of claim 1 of the present invention. Since neither Patel nor Molloy teaches or suggests these elements, separately or in combination, then the combination of Patel and Molloy does not render claim 1 obvious.

Claims 2-11 depend from claim 1 and are not anticipated for at least the same reasons. Applicant requests withdrawal of the § 103(a) rejection of claims 1-11 on these bases.

Claim 12 recites, in relevant part, analogous elements to claim 1 (except for the two interfaces); however, claim 12 is listed in method format. The Patent Office analyzes claim 12 with claim 1. For at least the same reasons set forth above with respect to claim 1, claim 12 is likewise not anticipated. Claims 13-22 depend from claim 12 and are not anticipated for at least the same reasons. Applicant requests withdrawal of the § 103(a) rejection of claims 12-22 on these bases.

Claim 23, like claim 12, recites essentially the same elements as claim 1 (except for the two interfaces); however, claim 23 is listed in a software format. The Patent Office analyzes claim 23 with claim 1. For at least the same reasons set forth above with respect to claim 1, claim 23 is likewise not anticipated. Claims 24-33 depend from claim 23 and are not anticipated for at least the same reasons. Applicant requests withdrawal of the § 103(a) rejection of claims 23-33 on these bases.

The present application is now in condition for allowance and such action is respectfully requested. The Examiner is encouraged to contact Applicant's representative regarding any remaining issues in an effort to expedite allowance and issuance of the present application.

Respectfully submitted,

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Date: April 7, 2006

Attorney Docket: 7000-107

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